Instructional Platforms

There is a wide range of user groups across SFA University that will require training. Given this wide range of functions and processes, there will not be one specific training delivery method that meets all of the training requirements.   Therefore, is critical to evaluate a variety of instructional platforms when choosing the delivery method that yields the optimal learning experience. Using this job aid and the information gathered during the audience analysis will facilitate the selection of an instructional platform when confronted with the following questions:

1. What tools and delivery technologies are available to supplement or provide alternatives to existing delivery methods?
2. What are the costs, benefits and implementation considerations associated with each alternative?
3. How do these delivery options support the needs identified in the Training Needs Analysis effort?

Factors for Determining Instructional Platforms

The type of training delivery method used is dependent on many factors. For each training intervention, the following factors need to be considered.

- Content
    - o Type of content (Task Based vs. Conceptual)
    - o Applicability of content
    - o Estimated length of training
    - o Need for consistency
    - o Shelf-life" of content, project stability of training material content
    - o Ability to reuse training
    - o Importance of access to expert information, or need for real-time coaching and feedback (interactive instruction)
    - o Need to simulate the 'live' environment
    - o Criticality of task to business objectives and related business events (importance of opportunities for safe practice environment vs. on-the-job learning)
    - o Educational objectives (Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation) and applicability of delivery method
- Delivery Logistics
    - o Number of users/audience size
    - o Geographical distribution of users
    - o Time available to roll out training
    - o Availability of user's time
    - o Existing training facilities
    - o Implementation considerations
- Costs
    - o Budget, time and resources available to develop training
    - o Budget, time and resources available to deliver training
    - o Maintenance costs (depends on stability of content)
- Other
    - o Appropriateness for audience type
    - o Success of previous training rollouts
    - o Ability to measure proficiency
    - o User Characteristics
    - o Impact on a User's Job
    - o Volatility of the system in a given functional area - How likely is the system functionality to change with the next implementation?

Instructional Platform Selection Guidelines

There are a number of training options available to be evaluated for the many training requirements of any course. While choosing one training method does not assume that one type of training is 'better' than any other, it does recognize the advantages and disadvantages of each type of training for varying types of training needs. It is important to understand the different training options available, their advantages and disadvantages, and when they can be used most effectively before deciding on a specific training method for a particular training need.

The Education and Training Team used the following guidelines to assess the following training methods:
- Instructor-led Training
- Expert-led Training
- Self-study Training (Paper-based)
- Computer-based Training (CBT)
- Video
- Business Simulation
- Video Conference
- Online-based training (Web)

Instructor-led Training

Instructor-led training is formal training conducted in a classroom-style environment. The trainer may or may not be familiar with the system but has a high degree of confidence in instruction and facilitation skills. Paper-based materials are produced to support the training in the form of instructor and participant guides. Instructor-led training may also include hands-on practice using a computer-training database populated with realistic data that simulates a real system. Therefore, it is easy to engage participants into an IL performance-based environment where they receive hands-on experience practicing procedures in the context of a scenario, while the instructor explains concepts and demonstrates procedures. This provides the participants with the opportunity to actually perform job activities in a risk-free environment.

Instructor-Led training can also incorporate various instructional strategies, including:

- **Lecture** - the instructor leads the participants through specific explanations without using the computer
- **Demonstration** - the instructor goes through an exercise on-line, while the students watch but do not participate. Demos are recommended for transactions that have been covered several times already
- **Walkthrough** - the instructor and participants go through an exercise on-line. Both the instructor and participants enter identical data
- **Exercise** - all participants go through an exercise individually
- **Simulation** - this is used for more complex exercises and simulates a real life scenario. Participants receive individual exercises and work with scenarios, etc.
- **Discussion** – allows participants to share thoughts and learning's. Can learn from each other
- **Case Study**

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Benefits of Instructor-led Training:
- Lower development costs
- Based on industry standards, instructor-led training requires more time to develop than paper-based, self-study, but relatively shorter development time compared to other media
- Allows the instructor to deviate from the training script. They can supplement or omit training based on the audience's understanding of the content area
- Allows the instructor to answer questions as they arise
- Traditional approach to training that people are comfortable receiving
- Group discussions and activities help participants learn through the experiences of others
- Training can be revised fairly quickly by either training developers or on the spot by the instructor

Benefits of Instructor-led Performance-based Training:
- Learning is active, not passive when conducting IL Performance-Based training
- Participants are able to practice job-related tasks in a risk-free environment without the danger of causing operational errors
- Practice activities give participants confidence in their ability to perform tasks on the job
- Participants receive immediate and individual feedback during practice

Risks of Instructor-led Training:
- Higher delivery costs especially for a widely dispersed audience
- Less consistent training than CBT due to situational influences
- Remediation or repeating training is more difficult and expensive

- – Lower level of assurance for user readiness
- – More difficult to schedule and complete training. Instructor-led training requires significant preparation time and classroom teaching time
- – If a large number of users need to be trained, training usually needs to begin well in advance of system roll-out
- – Message degradation may occur (the 'phone line' effect)
- – Training is centralized requiring the instructor, the participants, and the hardware to be in the same place at once
- – The instructor controls the pace of the training rather than the participants

When to Use Instructor-led Training?
- – Audience is distributed in critical mass groups (approximately 20)
- – Audience is easily accessible requiring minimal travel costs
- – Technical skills are limited
- – Material is conceptual or best taught in a discussion format

Expert-led Training

Expert-led training is a form of instructor-led training for a small audience and a specialized topic. Expert-led training sessions consist of a small number of users responsible for using a particular piece of the application and they sit down with the expert. The primary difference from instructor-led training is that much less instructional aides and material are required because the instructor is an expert. Expert-led training can include hands on practice using a training database populated with realistic data.

Benefits of Expert-led Training:
- – Lower development costs
- – Higher participation based on lower instructor to participant ratio
- – Complex material can be presented in a compressed time frame

Risks of Expert-led Training:
- – Less documentation in terms of training scripts, participant and instructor guides
- – Expertise remains centralized and limited to system expert
- – Redemption or repeating practice session is more difficult than CBT

When to Use Expert-led Training?
- – Very small audience groups
- – Very highly specialized course content
- – Highly specialized topic that lends itself to extensive contact with participants
- – A group of users small enough to warrant that development of complete instructor-led training is not required and cannot be cost justified

Self-Study Training (Paper-Based)

Self-study training is self-paced training delivered through paper-based materials. Instructors are not generally used. Self-study training typically contains a self-study book that walks the user through the function or process. Screen prints can be included to familiarize the user with the system or the user can be directed to perform hands-on exercises using a computer-training database populated with realistic data that simulates a real system. Participants are responsible for the pace of training and comprehension. Comprehension can be tested through written exercises.

Benefits of Self-Study Training:
- – Training is self-paced so users do not have to wait or keep up with other participants learning the same tasks
- – Generally, participants complete training faster than at an instructor-led pace
- – Participants can complete material at their own pace and at the point-of-need
- – Remediation or repeating practice session is easy. Users can retake the training as often as they wish
- – Ensures all training is delivered with consistent messages
- – Less expensive to develop than CBT's
- – Based on industry standards, development time is relatively short compared to other media
- – Delivery is less time consuming and less costly

- Training materials are portable and easy to distribute
- Training materials are relatively easy to revise
- User does not have to be computer literate to access training
- Training Materials are easily accessible as reference materials as needed

Risks of Self-Study Training:
- Lack of an instructor to answer questions may limit effectiveness. Instruction can be misinterpreted because of the lack of interaction and feedback
- Participants have little interaction with others or feedback on their mastery of the training content
- Difficult to monitor completion of training by users
- Lack of interaction
- No hands-on experience with the system, although it can be incorporated
- Generally, not as effective as CBT's in preparing users to use a system
- Difficult to maintain or modify training materials that may be spread out across SFA University
- It is difficult to simulate complex processes without instructor demonstration or computer simulation
- Retention is limited
- The pace of training is difficult to maintain because of individual learning paces

When to Use Self-Study Training?
- Users do not have access to the appropriate technology for CBT's
- Users have limited or no computer knowledge
- Audience is distributed in a variety of sizes in a variety of locations
- Screens that a function contains are commonly used by a wide variety of users
- Material is task based

Computer-Based Training (CBT)
Computer-Based Training (CBT) is delivered on a personal computer with the possible combination of sound, graphics, text, and video. Participants log onto their computers in their normal work environment. The computer assumes the role of the instructor providing the information and scenarios to which the participant is asked to respond. The computer analyzes the response and provides feedback to the participant. Obviously, the user must have access to the appropriate technology in order for a CBT to be used. Instructors and paper-based materials are not generally used. CBT's can cover a broad spectrum including:
- **CBT On-line Presentation** - This is a non-interactive form of a CBT. Users utilize a PC to view a presentation style lesson just like a slide show.
- **CBT Interactive Concept Training** - This is an interactive form of a CBT where the user is prompted to provide information or answer questions. System screens may be displayed, but there is no direct interaction with these screens.
- **CBT Interactive Application Simulation** - This is the form of a CBT that most people consider CBT. The user has hands-on interaction with a simulation of the system that looks and acts like the production system. The difference is that the user will see additional graphics or text that will provide feedback or highlight areas of special interest.
- **CBT Audio** - This form of a CBT incorporates the concepts of Interactive Application Simulation with the addition of audio.
- **CBT Multimedia** - This form of a CBT incorporates the concepts of Interactive Application Simulation with the addition of audio and video.

With any of these CBT options, software is generally available to track completion of the CBT modules. If an Interactive CBT is used, success rates with tasks performed in the simulated conversation can be tracked to indicate the user's readiness for conversion. Quizzes and tests can be incorporated to further measure comprehension and readiness. Development costs of the different types of CBT increase from On-line Presentation to Multimedia while most of the benefits from using CBT are gained starting with the Interactive Application Simulation.

Benefits of CBT:
- CBT increases learning and retention rates through immediate and appropriate feedback, active simulation of work environment and increased participant motivation
- Generally, participant's complete CBT training faster than at an Instructor-led pace, thus reducing training time
- Training is self-paced. Users can complete the training on their schedule

- Training is delivered consistently
- Remediation or repeating training session is easy. Users can retake the training as often as they wish
- Delivery is less time consuming and less costly than instructor-led training
- Provides ability to easily monitor completion of training
- Provides the ability to easily track user proficiency and readiness
- Training is decentralized; participants can conduct training on demand wherever the hardware is available
- Large, geographically diverse audience groups can participate in training in a short amount of time
- Revisions of CBT are easily distributed

Risks of CBT:
- More costly to develop than instructor-led training
- Based on industry standards, CBT materials require a great deal more technical expertise and development time than paper-based and instructor-led training materials
- Requires significant investment in hardware and software
- Revising CBT materials is more costly and requires longer time than revising paper-based and instructor-led materials
- No instructor is available during CBT to answer individual questions
- Participants have little interaction with others; instruction can be misinterpreted because of lack of interaction
- Effectiveness of training is diminished if participants do not have existing knowledge of computers and application systems
- Effectiveness is diminished if participants do not work in a quiet, uninterrupted environment with dedicated time to take the courses

Why use Technology-Based Training?
- Desire ongoing easy access to training
- High workforce turnover
- Difficulty in allowing users to have extended periods of time away from their job
- There are a large number of users to be trained
- Audience is distributed in a variety of remote locations
- Training must be delivered consistently to all user groups
- Screens that a function contains are commonly used by a wide variety of users
- There is a need to easily track and monitor user proficiency and readiness

Video

Video training is delivered primarily through a video that is viewed by the user. This type of training can range from simply videotaping an instructor-led or expert-led training session to producing a video that contains people, graphics, system screens and/or animation. Paper-based materials in the form of a participants guide are often used in conjunction with a video. Users can be directed to perform hands-on exercises in their participants guide or use a training database to populate systems with realistic data (either at the end of the video or by stopping the video).

Benefits of Using Video Training:
- Instructor-led or expert-led training can be delivered to more users at a lower cost
- Training is self-paced so users do not have to wait or keep up with other participants learning the same tasks
- Remediation or repeating practice session is easy. Users can watch the video as often as they wish.
- User does not have to be computer literate to access training
- Easy to distribute, especially to large audiences
- Can be entertaining

Risks of Using Video Training:
- Lack of an instructor to answer questions may limit effectiveness
- More difficult to monitor completion of training by users
- Can be expensive to produce a video containing graphics, system screens, animation, etc.
- No hands-on interaction with the system

When to Use Video Training?

- Recording instructor-led or expert-led training for future use
- Users do not have access to the appropriate technology for a CBT
- Training does not include using a system
- Audience is distributed in a variety of sizes in a variety of locations, or
- Large groups of users will be in one location at one time

Business Simulation

Instructor-Led	vs.	Business Simulation
-Instructor controlled		-Leaner controlled
-Content disassociated from context		-Content shapes context
-Focus on remembering facts, knowledge		-Focus on applying knowledge
-Driven by objectives		-Driven by outcomes
-Testing confirms understanding		-Performance confirms competence

eLearning Strategy & Criteria

By implementing an eLearning strategy, SFA University could transform existing training courses into a more cohesive and integrated program. As a result, SFA could realize economies of scale such as: reduced costs, increased speed to market & improved training access and usability. However, each course needs to be individually evaluated before determining the appropriate training solution. Below is a list of criteria to consider when selecting the right performance solution for a specific training course.

Criteria	Questions/	eLearning +/-
Development Cost	How much money is available to develop training right now? What are the initial and ongoing development/maintenance costs?	eLearning alternatives typically require less ongoing development and maintenance costs but require more funds up front
Development timeframe prior to rollout	How much time is available to develop training before it needs to be rolled out?	eLearning applications tend to require more time up front
Task complexity	What type of content is it? Is the content more awareness, system application or decision-making?	eLearning strategies become more challenging with content based around decision-making, but can add value for awareness and system-based content
Cognitive Level		
Business processes		
Technical/role specific skills	What technical skills will be needed to develop the application? Are people available or is outsourcing necessary? How much will outsourcing cost? Is the content more technically based (using a system) or educationally based?	
General workplace skills	Are these skills relevant to the entire workforce, or related to a specific job?	eLearning that can service the entire workforce can add great value
Individual foundation skills		
Interdependence of target skills	Are different audiences learning different things?	
Need for maintenance	Is the training delivered once and done? How much ongoing/additional training and maintenance is necessary? How much is the content expected to change?	eLearning requires updating of the application vs. Instructor-Led training that requires Train the Trainer and updating of materials
Need for consistency	What do current training courses/programs look like? Do you or the audience want the look and feel of content/delivery to be consistent, or can it vary?	
Expert information required	How is the information/content being gathered to develop training? Do experts need to be interviewed? Do experts need to be involved with delivery?	
Deployment costs (e.g. # of training sessions)	Each training session requires costly expenses with facilities, travel, etc. How much do materials cost? What is the current technological infrastructure of the developers as well as the	The more often a course is offered and repeated over years, the higher these costs and the more value gained with eLearning

	audience?	
Need for on-the-job support	After training is delivered, what type of support does the audience currently need? Is any support available?	eLearning provides various methods of delivering on-the-job or point of need support
Audience growth	How much is the audience expected to grow? Will the training need to be re-delivered?	eLearning provides a cheaper method of training a growing audience
Audience turnover	What is the current turnover of the audience?	
Audience size	How big is the audience? How dispersed is the audience?	Each participant costs X amount of money per course. There is more valued gained in eLearning as costs are not incurred per additional users
Low turnout rates	Is there a tendency for participants to miss training sessions, thus requiring additional sessions? Are key audiences not receiving the appropriate training if they miss a scheduled session?	eLearning provides point of need access to all audiences that need to be touched
Geographic dispersion of audience	Is the audience scattered throughout the region, country or world?	The greater the dispersion, the more value gained with eLearning. eLearning provides a convenient means for reaching audiences all over
Computer literacy/comfort	Is the audience comfortable with computers? How computer literate are they?	eLearning poses potential issues if the audience is not very comfortable with computers
Work Environment/Culture	What push back would be received within the developer's culture or the audience's culture if a change were made to the current training process?	
Collaborative work tasks		
Competitive work culture		
Cost of failure	What is the impact if eLearning does not succeed? Are current training programs resulting in desired performance goals?	Initially, eLearning tends to be more costly
Duplication	Are there multiple courses where content is duplicated?	eLearning provides the opportunity to consolidate and integrate duplicated courses

Resources needed
- Point people to understand the current costs, content, delivery and turnout rates associated with each of the current training courses.
- Audience evaluations for learning retention and improved on the job performance

SFA University Issues
- Initial outlay of cost to build applications that will result in future savings (Option 2: no initial costs and but pay out from cost savings)
- Reduction in courses taught by Regional trainers
- Ongoing maintenance of eLearning application(s)
- Loss of face to face interaction with audience
- Audience - technological infrastructure available